

Work Order ID 144309

April 12, 2016 11:04:15 AM

144309

Page 1

Item ID: 647.3701

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 5/10/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals:

Process Plan: *5H*Date: *20160412*

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

DAS
6
9-89

MLJ 16-04-27

647.3700

NC3

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP 647.3701

DAS
27
9-89
MAY 04 2016

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS
6
9-89
DAS
28
9-89
APR 27 2016

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

Quality Control

DAS
27
9-89

MAY 04 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

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Page 2

Item ID: 647.3701 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: 412 Cable Cutter System, Standard
Start Date: 5/2/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 5/10/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging					DAS 27			
Packaging	Memo	0.00				9-59			
Packaging	Identify and pack for shipping as per PPP 647.3701								
	Location: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

MAY 04 2016

MCS MAY 05 2016

MCS MAY 04 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 144309

144309

Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM IPP
REV:B 15.01.26 as per ecr 14-214 DD VERF:JLM
IPP REV:C AS PER REV NC3 15.03.18 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
601.3082 *601 3082* RIVET CR3212-4-1 DAS 27 9-89		Purchased		No			Each	0.0000	**	6 13363			DAS 28 9-89
647.3903 *647 3903* Deflector Assembly DAS 27 9-89		Manufactured		No			Each	0.0000	**	1 14430			DAS 28 9-89
647.3801 *647 3801* 412 Upper Cutter Assy DAS 27 9-89		Manufactured		No		110	Each	7.0000	**	1			DAS 28 9-89
Location Loc Qty Loc Code CCK028 7 124726 2 124728 3 m129702 2													
647.3803 *647 3803* Lower Cutter Assembly DAS 27 9-89		Manufactured		No		110	Each	0.0000	**	1 144311%			DAS 28 9-89
647.4410 *647 4410* Rail DAS 27 9-89		Manufactured		No		110	Each	17.0000	**	1			DAS 28 9-89
Location Loc Qty Loc Code CCK081 17 120755 1 120986 16													

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Parent Item: 647.3701

647.3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

647.4010 Manufactured No

110 Each 20.0000 1 1

647 4010

Wiper Deflector RH

Location

Loc Qty

Loc Code

cck87

20

120740

17

m129721

3

647.4011 Manufactured No

110 Each 19.0000 1 1

647 4011

Wiper Deflector LH

Location

Loc Qty

Loc Code

cck78

19

120741

16

m129721

3

647.4110 Manufactured No

110 Each 16.0000 1 1

647 4110

Doubler

Location

Loc Qty

Loc Code

CCK080

16

120987

16

647.4111 Manufactured No

110 Each 17.0000 1 1

647 4111

Doubler

Location

Loc Qty

Loc Code

cck111

17

120743

16

120967

1

DAS
27
9-89

APR 27 2016

DAS
6
9-89
DAS
28
9-89

DAS
6
9-89
DAS
28
9-89

DAS
6
9-89
DAS
28
9-89

DAS
6
9-89
DAS
28
9-89

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Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

647.4112

Manufactured No

110

Each

5.0000

1

1

647 4112

Clip

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK112

5

126770

5

647.4113

Manufactured No

110

Each

5.0000

1

1

647 4113

Clip

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

5

126771

5

647.4114

Manufactured No

110

Each

39.0000

2

2

647 4114

Shim

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK112

39

120635

11

120746

28

647.4115

Manufactured No

110

Each

24.0000

2

2

647 4115

Shim

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK112

24

120747

24

DAS
27
9-89

DAS
6
9-89

DAS
28
9-89

APR 27 4 00 PM

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Work Order ID: 144309

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Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

647.4116 Manufactured No

110 Each 21.0000 1 1

647 4116

Shim

DAS
28
8-89
DAS

Location

Loc Qty

Loc Code

CCK112

21

120748

1

121064

20

647.4210 Manufactured No

110 Each 16.0000 1 1

647 4210

Bracket LH

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

2

120749

2

CCK123

14

121086

14

647.4211 Manufactured No

110 Each 16.0000 1 1

647 4211

Bracket RH

DAS
28
9-89
APR 27 2016

Location

Loc Qty

Loc Code

CCK112

1

120750

1

CCK123

15

121134

15

647.4311 Manufactured No

110 Each 1.0000 1 1

647 4311

RH Lower Strut

DAS
28
9-89
MAY 04 2016

Location

Loc Qty

Loc Code

CCK67

1

126398

1

DAS
27
9-89

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Work Order ID: 144309

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Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

647.4310 Manufactured No

110 Each 20.0000 1 1

647 4310

LH Lower Strut

Location

Loc Qty

Loc Code

cck066

20

126395

19

126396

1

647.4312 Manufactured No

110 Each 1.0000 1 1

647 4312

LH Upper Strut

Location

Loc Qty

Loc Code

CCK67

1

126399

1

647.4313 Manufactured No

110 Each 1.0000 1 1

647 4313

RH Upper Strut

Location

Loc Qty

Loc Code

cck068

1

126401

1

NAS1149FN832P Purchased No

110 Each 2,591.000 34 34

NAS1149FN832P

Washer

Location

Loc Qty

Loc Code

GA

475

M133316

16

M133769

459

ST260a

1200

M134257

1200

ST262

916

M133709

916

DAS
27
9-89

APR 27 2016

68-6
9
DAS
28
9-89

68-6
9
DAS
28
9-89

68-6
9
DAS
28
9-89

68-6
9
DAS
28
9-89

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Work Order ID: 144309

144309

Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0332P

Purchased

No

110

Each

1,930.000

157

157

NAS1149F0332P

Washer

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

GA

312

m133709

312

ST262

1618

m134134

118

m134257

1500

157

MS27039-1-07

Purchased

No

110

Each

332.0000

12

12

MS27039-1-07

Screw

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

GA

304

125654

304

Return2016

1

m127813

1

ST281

27

125654

27

12

MS27039-1-10

Purchased

No

110

Each

526.0000

42

42

MS27039-1-10

SCREW

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

CA

41

m128635

41

GA

18

m129541

18

over 006

300

m134567

300

ST280

167

m134370

167

42

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Work Order ID: 144309

144309

Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-08-08

Purchased

No

110

Each

79.0000

16

16

MS27039-08-08

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

CA

8

m130113

8

ST278

71

m134142

71

110

Each

231.0000

14

14

MS27039-1-09

Purchased

No

MS27039-1-09

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

34

18057

34

GA

36

124859

36

ST280

161

m134167

161

110

Each

352.0000

2

2

MS27039-08-11

Purchased

No

MS27039-08-11

SCREW

DAS
27
9-89

Location

Loc Qty

Loc Code

ST278

352

m133769

352

110

Each

223.0000

1

1

MS24694-S49

Purchased

No

MS24694-S49

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST284

223

m129499

100

m129702

123

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Work Order ID: 144309

144309

Parent Item: 647.3701

647.3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

MS24694-C53

Purchased

No

110

Each

88.0000

8

8

MS24694-C53

Screw

BAS
27
9-89

Location

Loc Qty

Loc Code

ST285

88

m129702

88

**

DAS

DAS

6

28

9-89

9-89

601.3073

Purchased

No

110

Each

3.0000

1

1

601.3073

Connector

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK099

3

M133781

1

M134531

2

**

DAS

6

9-89

DAS

28

9-89

AN3-4A

Purchased

No

110

Each

343.0000

3

3

AN3-4A

Bolt

BAS
27
9-89

Location

Loc Qty

Loc Code

over003

300

m134502

300

ST350

43

m133990

43

**

DAS

6

9-89

DAS

28

9-89

AN3-11A

Purchased

No

110

Each

162.0000

8

8

AN3-11A

Bolt

DAS
27
9-89

Location

Loc Qty

Loc Code

ST349

162

m134167

162

**

DAS

6

9-89

DAS

28

9-89

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Work Order ID: 144309

144309

Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

AN3C10A	Purchased	No	110	Each	18.0000	2	2		DAS 6 9-89	DAS 28 9-89
AN3C10A								**		
Bolt										
DAS 27 9-89			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			ST349	18						
			m134167	18						
CR3212-4-2	Purchased	No	110	Each	30.0000	6	6		DAS 6 9-89	DAS 28 9-89
CR3212-4-2								**		
Cherry Rivet										
DAS 27 9-89			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			ST320	30						
			m133363	30						
CR3212-4-3	Purchased	No	110	Each	0.0000	17	17		DAS 6 9-89	DAS 28 9-89
CR3212-4-3								**		
Cherry Rivet										
DAS 27 9-89										
CR3212-4-4	Purchased	No	110	Each	0.0000	4	4		DAS 6 9-89	DAS 28 9-89
CR3212-4-4								**		
CHERRY RIVET										
DAS 27 9-89										
CCR264SS3-04	Purchased	No	110	Each	535.0000	12	12		DAS 6 9-89	DAS 28 9-89
CCR264SS3-04								**		
Rivet										
DAS 27 9-89			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>					
			CCK004	400						
			123785	400						
			ST321	135						
			m129702	135						

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Work Order ID: 144309

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Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

CCR264SS-3-03

Purchased

No

110

Each

333.0000

16

16

CCR264SS-3-03

Rivet

DAS
6
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

LG001

165

m128606

33

m134023

132

ST321

168

m134396

168

CR3213-4-2

Purchased

No

110

Each

303.0000

13

13

CR3213-4-2

Cherry Rivet

DAS
6
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

192

123301

192

ST319

111

m131340

111

CR3213-4-3

Purchased

No

110

Each

466.0000

32

32

CR3213-4-3

Rivet, Cherry

DAS
6
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK004

140

m129541

100

m130388

40

ST318

200

m131340

200

ST319

126

123301

126

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Work Order ID: 144309

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Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-4

Purchased

No

110

Each

200.0000

19

19

CR3213-4-4

Rivet, Cherry

DAS

6

DAS

28

9-89

9-89

Location

Loc Qty

Loc Code

CCK005

100

M134376

100

ST319

100

M130388

35

M133694

65

BAS
27
9-89

CR3213-4-5

Purchased

No

110

Each

225.0000

42

42

CR3213-4-5

Rivet

DAS

6

DAS

28

9-89

9-89

Location

Loc Qty

Loc Code

CCK003

100

M129913

100

ST319

125

M129913

125

BAS
27
9-89

CR3213-4-8

Purchased

No

110

Each

112.0000

4

4

CR3213-4-8

Rivet

DAS

6

DAS

28

9-89

9-89

Location

Loc Qty

Loc Code

ST319

112

123785

112

BAS
27
9-89

MS21042-3

MS21042L3

Purchased

No

110

Each

18.0000

79

79

MS21042-3

Nut / use MS21042L3

DAS

28

DAS
6
9-89

Location

Loc Qty

Loc Code

ST304

18

M129682

18

BAS
27
9-89

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Work Order ID: 144309

144309

Parent Item: 647.3701

647.3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042-08 MS21042L08 Purchased No

110 Each 33.0000 18 18

MS21042-08

USE MS21042L08

**

134376

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

8

m130388

8

MS21047L06 Purchased No

110 Each 58.0000 6 6

MS21047L06

Nut Plate

**

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST303

58

m131340

58

MS21047L08 Purchased No

110 Each 51.0000 6 6

MS21047L08

Nut Plate

**

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

51

m129702

51

MS21047-3 Purchased No

110 Each 159.0000 4 4

MS21047-3

Nut Plate

**

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

159

m134166

159

APR 27 2016

Picklist Print

April 12, 2016 11:04:21 AM

Page 13

Work Order ID: 144309

144309

Parent Item: 647.3701

647 3701

Parent Item Name: 412 Cable Cutter System, Standard

Start Date: 5/2/2016

Required Date: 5/10/2016

Start Qty: 1:00

Required Qty: 1.00

MS21071L3

Purchased No

110 Each

194.0000

4 4

MS21071L3

ANCHOR NUT

DAS
27
9-89

Location

Loc Qty

Loc Code

ST299

94

m129702

94

ST301

100

125654

100

**

DAS
27
9-89

DAS
28
9-89

601.3083

Manufactured No

110 Each

9.0000

1 1

601 3083

Adhesive Rubber Seal

DAS
27
9-89

Location

Loc Qty

Loc Code

cck009

9

m134349

9

**

DAS
27
9-89

DAS
28
9-89

601.1012

600.1012

Purchased No

110 Each

0.0000

1 1

601 1012

Sealant (One 6 oz)

DAS
27
9-89

20P 10/16

m134349

9

**

DAS
27
9-89

DAS
28
9-89

601.2045

Purchased No

110 Each

16.0000

1 1

601 2045

RTV (LOCTITE 598)McMaster p/n: 6641A41

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK096

8

m133588

8

GA

8

m134260

8

**

DAS
27
9-89

DAS
28
9-89

APR 27 2016



EFFECT ON DWG
☐ INC. ☒ UNINC.

EFF. NEXT ORDER

ECR: N/A

Isometric drawing of a mechanical assembly, likely a structural component, showing various parts and dimensions. The drawing includes a detailed view of a curved section labeled "DETAIL F".

Key components and dimensions shown:

- Top Section:**
 - 35: 2 PL
 - 24: 2 PL
 - 47: 2 PL
 - 1: 2 OR 1
 - 5: 1
 - 17: 1
 - 24: 8 PL
 - 28: 8 PL
 - 14: 2 PL
 - 16: 1
 - 13: 2 PL
 - 52: 4 PL
 - 41: 8 PL
 - 38: 4 PL
 - 51: 4 PL
 - 41: 8 PL
 - 9: 1
 - 38: 9 PL
- Curved Section (DETAIL F):**
 - 4 PL 34
 - 8 PL 24
 - 4 PL 47
- Longitudinal Section:**
 - 24: 72 PL
 - 36 PL
 - 47: 36 PL
 - 46: 4 PL
 - 12: 1
 - 23: 16 PL
 - 27: 8 PL
 - 48: 8 PL
- Other Callouts:**
 - 1: 6
 - 9: 1
 - REF 21

SHOWN ISOMETRICALLY ☒

20160

ACTION ITEM:
1.

20160412

SA
144309.

57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF			
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY			
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION	MATERIAL	SPECIFICATION	
			QTY							
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED		
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR	☐ YES ☒ NO		



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04845

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/11/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG

QC

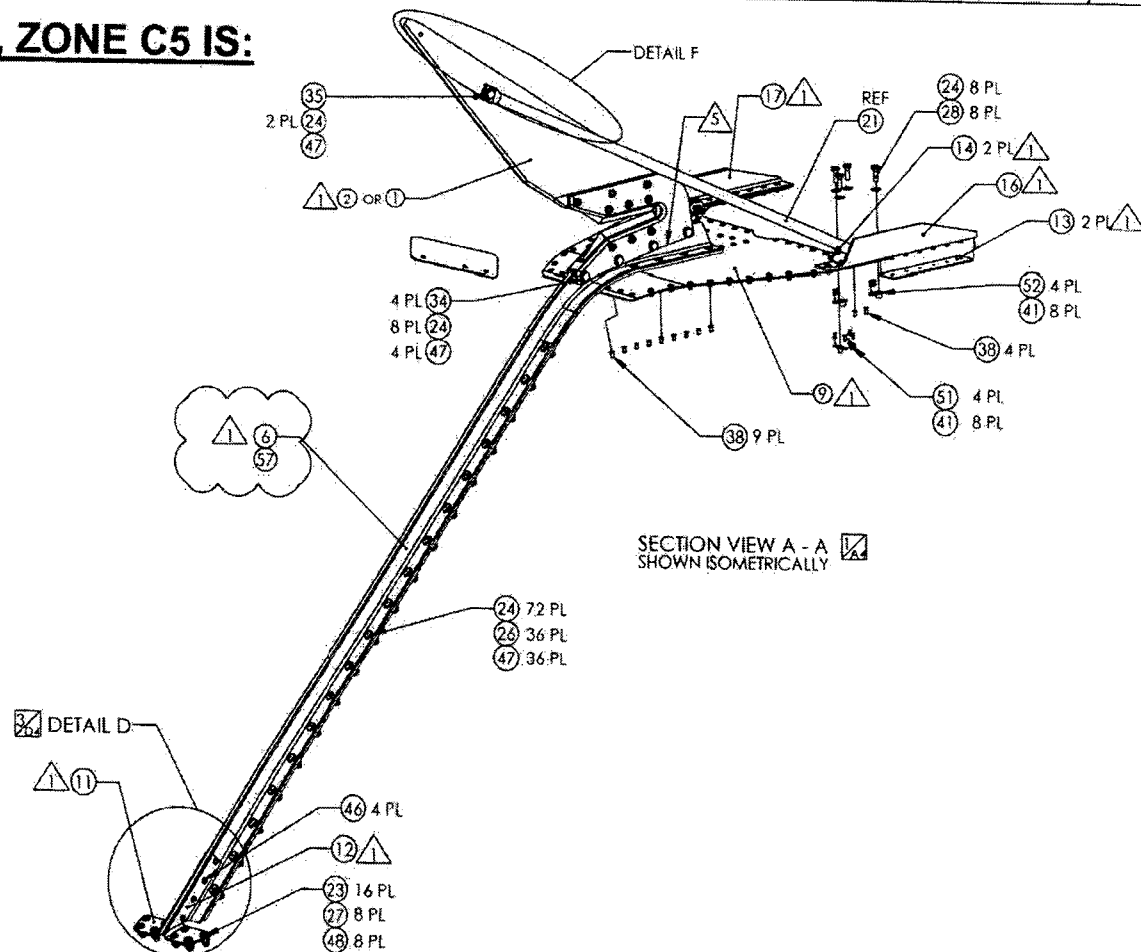
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED F/N 57

ECR:

SHEET 1, ZONE C5 IS:



ACTION ITEM:

1.

SECTION VIEW A - A
SHOWN ISOMETRICALLY

57	A	647.3916	1	1	1	1	DEFLECTOR UPPER HALF						
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION				MATERIAL		SPECIFICATION
DOCUMENTS EFFECTED:			QTY										
			☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM				CHANGE CATEGORY		DER REVIEW REQUIRED				
							☐ MAJOR ☒ MINOR		☐ YES ☒ NO				

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 02728

SHEET 1 OF 1

DWG NO. 647.3700

REV: NC

PREPARED BY

R. ROSANO

DATE: 12/23/09

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR

KMEC

60

EFF

~~NEXT ORDER~~

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED MODEL 214 TO APPROPRIATE DESCRIPTIONS

SHEET 1, ZONE D7 IS:

IS

						647.3704	204, 205, 212, 214 CABLE CUTTERS KIT HIGH		
						647.3703	204, 205, 212, 214 CABLE CUTTERS KIT LOW		
						647.3702	412 CABLE CUTTERS KIT HIGH		
						647.3701	412 CABLE CUTTERS KIT LOW		
					FIND	PART #	DESCRIPTION	MAT'L	SPEC.

F/N	TC	PART NUMBER		2901
			QTY	

QTY

DESCRIPTION

MATERIAL

SPECIFICATION

DOCUMENTS EFFECTED:

☒ MDL ☒ INSTALL INSTRUCL ☒ ICA ☒ BOM

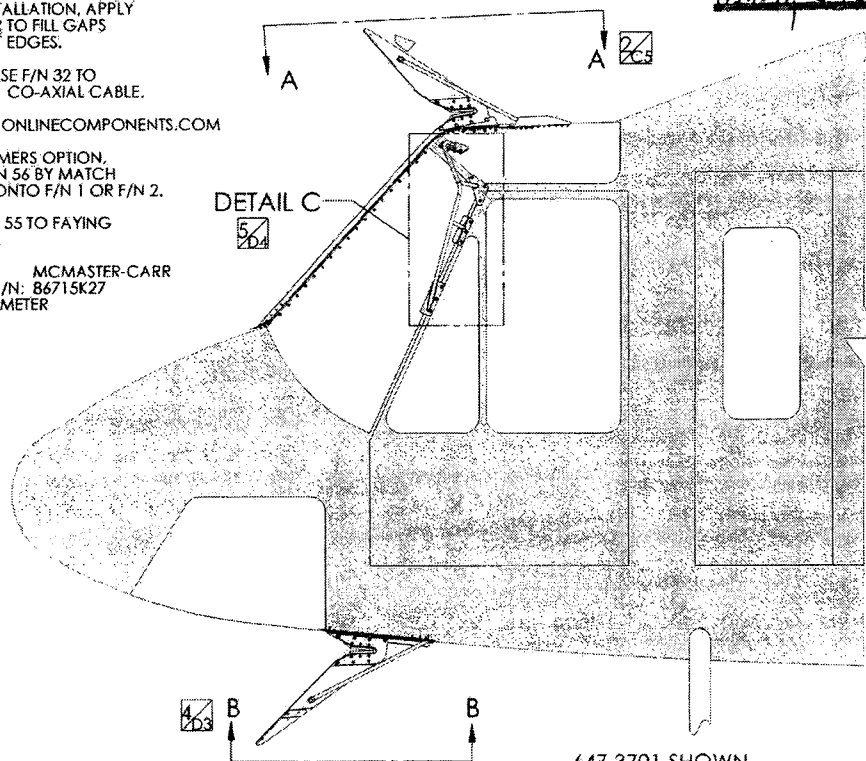
CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☒ YES ☐ NO

 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER

02728, 04845, 04981

REVIEWS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVIEWED PRI		N/C
N/C	INITIAL RELEASE	05-09-00	P. DRAGO



647.3701 SHOWN

	REF	REF	REF	REF	56	647.5701	GPS MOUNT KIT			
A/R	A/R	A/R	A/R	A/R	55	601.2045	RTV		LOCITE 998	
A/R	A/R	A/R	A/R	A/R	54	601.1012	SEALANT		PH-1425 CLASS B	
1	1	1	1	1	53	601.3063	ADHESIVE RUBBER SEAL		NEL-B-3065	
4	4	4	4	4	52	601.2957	NUTPLATE		MS2107-13	
4	4	4	4	4	51	600.0795	NUTPLATE		MS21047-3	
6	6	6	6	6	50	601.3066	NUTPLATE		MS21047J06	
6	6	6	6	6	49	601.3065	NUTPLATE		MS21047J06	
18	18	18	18	18	48	601.2973	LOCKNUT		MS21042J08	
79	79	79	79	79	47	601.2943	LOCKNUT		MS21042-3	
4	4	4	4	4	46	601.2364	CERRY RIVET		CR3213-4-8	
28	28	42	42	42	45	601.1183	CERRY RIVET		CR3213-4-4	
16	16	19	19	19	44	601.1915	CERRY RIVET		CR3215-4-4	
24	24	32	32	32	43	601.0790	CERRY RIVET		CR3213-4-3	
31	31	13	13	13	42	601.1039	CERRY RIVET		CR3213-4-2	
3704	3703	3702	3701	FIND	PART #		DESCRIPTION		MATL	SPEC

	16	16	16	16	41	601.2207	NUTPLATE RIVET	CRC264SS-3-04	
	12	12	12	12	40	601.2491	NUTPLATE RIVET	CRC264SS-3-04	
	7	7	4	4	39	601.1066	CHERRY RIVET	CR3212-4-4	
	17	17	17	17	38	601.1065	CHERRY RIVET	CR3212-4-3	
	5	5	6	6	37	601.1604	CHERRY RIVET	CR3212-4-2	
	6	6	6	6	36	601.3082	CHERRY RIVET	CR3212-4-1	
	2	2	2	2	35	601.1874	BOLT	AN3C10A	
	8	8	8	8	34	601.2826	BOLT	A16-11A	
	3	3	3	3	33	601.2823	BOLT	AN3-4A	
	1	1	1	1	32	601.3073	CONNECTOR	OBS-44G	
	8	8	8	8	31	601.2419	SCREW	MS2464P-C53	
	1	1	1	1	30	601.3070	SCREW	MS2464P-S49	
	2	2	2	2	29	601.2893	SCREW	MS27039-QE11	
	14	14	14	14	28	601.3069	SCREW	MS27039-1-0P	
	16	16	16	16	27	601.2263	SCREW	MS27039-QB06	
	42	42	42	42	26	601.1365	SCREW	MS27039-1-1D	
	12	12	12	12	25	601.2198	SCREW	MS27039-1-0T	
	157	157	157	157	24	601.1607	WASHER	HAS1149FS30ZP	
	34	34	34	34	23	601.2764	WASHER	HAS1149FN632P	
	1	1	1	1	22	647.4313	RH UPPER STRUT		
	1	1	1	1	21	647.4312	LH UPPER STRUT		
	1	1	1	1	20	647.4310	LH LOWER STRUT		
	1	1	1	1	19	647.4311	RH LOWER STRUT		
	1	1			18	647.4212	PLATE		
	1	1	1	1	17	647.4211	BRACKET RH		
	1	1	1	1	16	647.4210	BRACKET LH		
	1	1	1	1	15	647.4116	SHIM		
	2	2	2	2	14	647.4115	SHIM		
	2	2	2	2	13	647.4114	SHIM		
	1	1	1	1	12	647.4113	CLIP		
	1	1	1	1	11	647.4112	CLIP		
	1	1	1	1	10	647.4111	DOUBLER		
	1	1	1	1	9	647.4110	DOUBLER		
	1	1	1	1	8	647.4011	WIPER DEFLECTOR LH		
	1	1	1	1	7	647.4010	WIPER DEFLECTOR RH		
	1	1	1	1	6	647.3915	DEFLECTOR		
	1	1	1	1	5	647.4410	RAIL		
	1		1		4	647.3804	LOWER CUTTER ASSY HIGH		
		1		1	3	647.3803	LOWER CUTTER ASSY LOW		
	1				2	647.3802	212 UPPER CUTTER ASSY		
			1	1	1	647.3801	412 UPPER CUTTER ASSY		
						647.3704	204, 205, 212 CABLE CUTTERS KIT HIGH		
						647.3703	204, 205, 212 CABLE CUTTERS KIT LOW		
						647.3702	412 CABLE CUTTERS KIT HIGH		
						647.3701	412 CABLE CUTTERS KIT LOW		
	3704	3703	3702	3701	FIND	PART #	DESCRIPTION	MATL	SPEC

QTY

NEXT ASSY IS:

PARTS LIST

ORIGINAL DATE DMO-DA-STR 00-29-09	
DRAWN BY J. JACKSON	CHECKED D. BARKER
DRAWING APPROVAL P. BRAVO 00-29-09	
CONTRACT NO.	

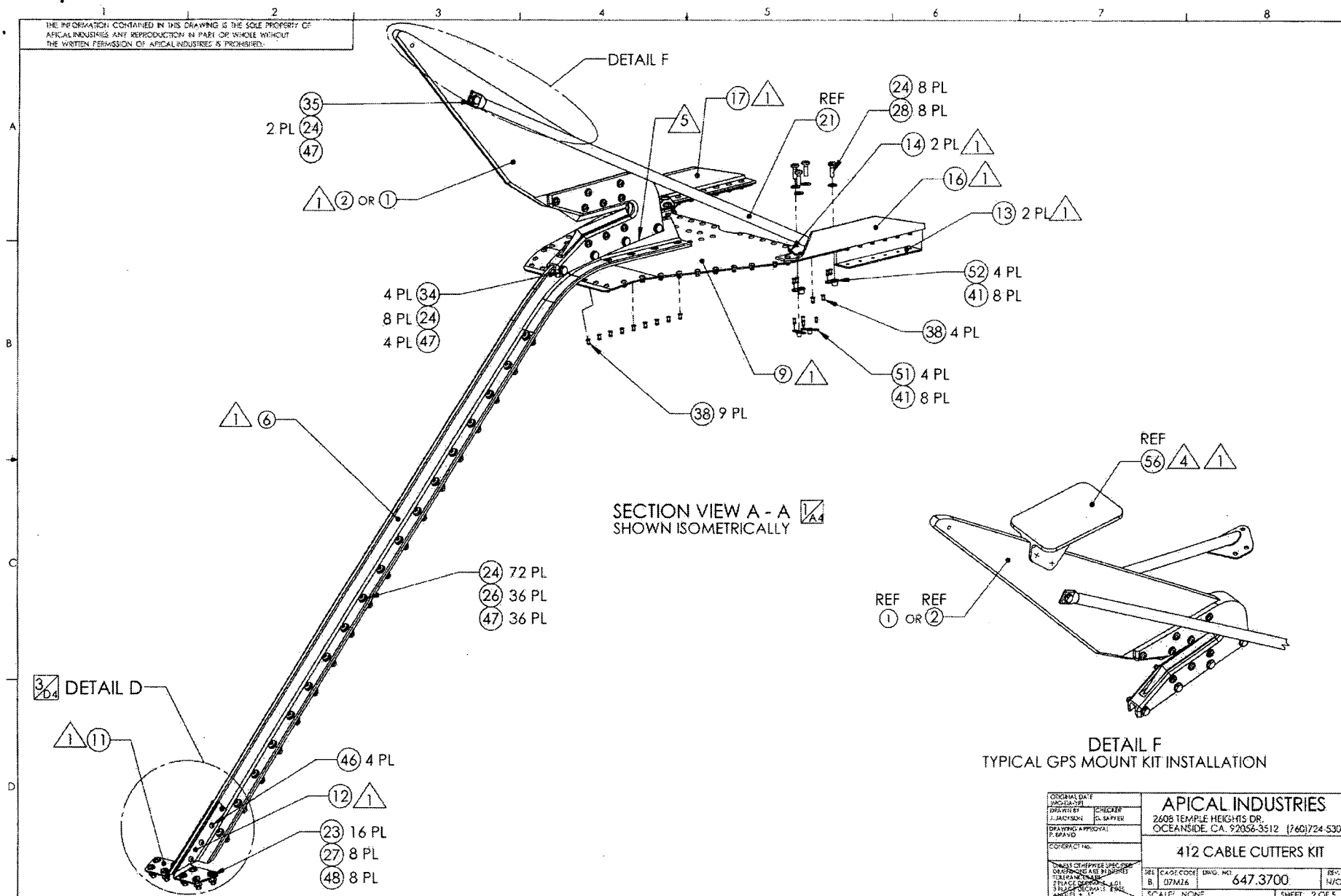
APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760) 724-5300

412 CABLE CUTTERS KIT

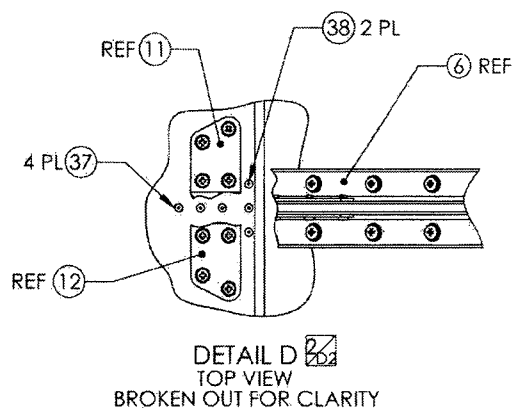
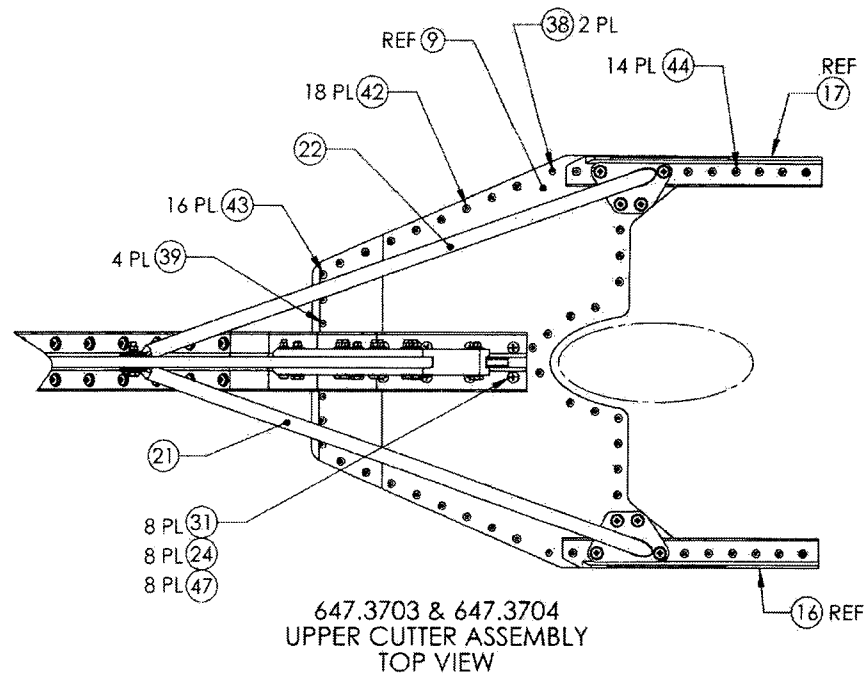
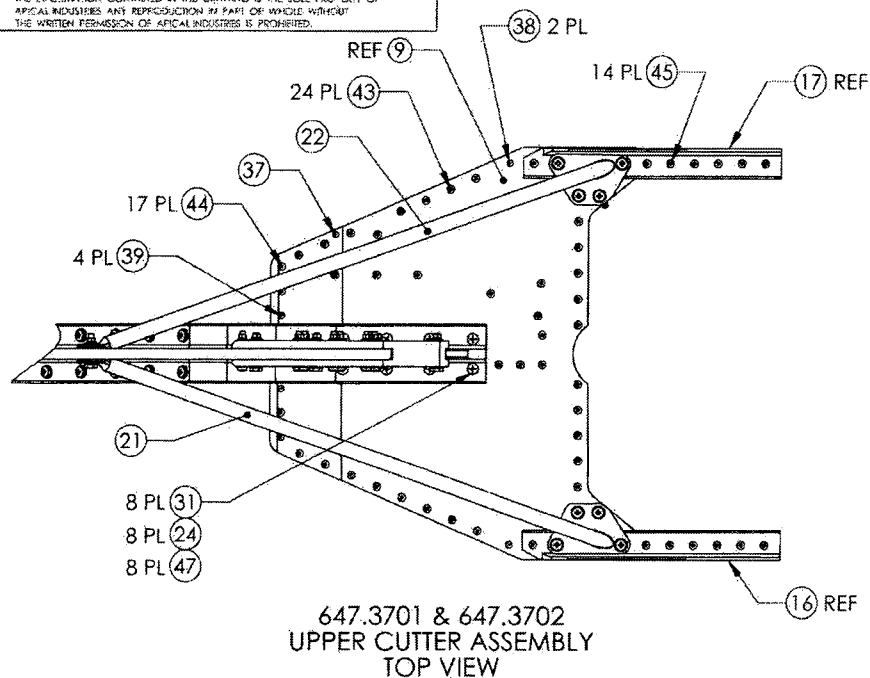
3RE B	CAGE CODE 07MAZ6	QTY. NO. 647.3700	REV. N/C
SCALE NONE		SHEET: 1 OF 6	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



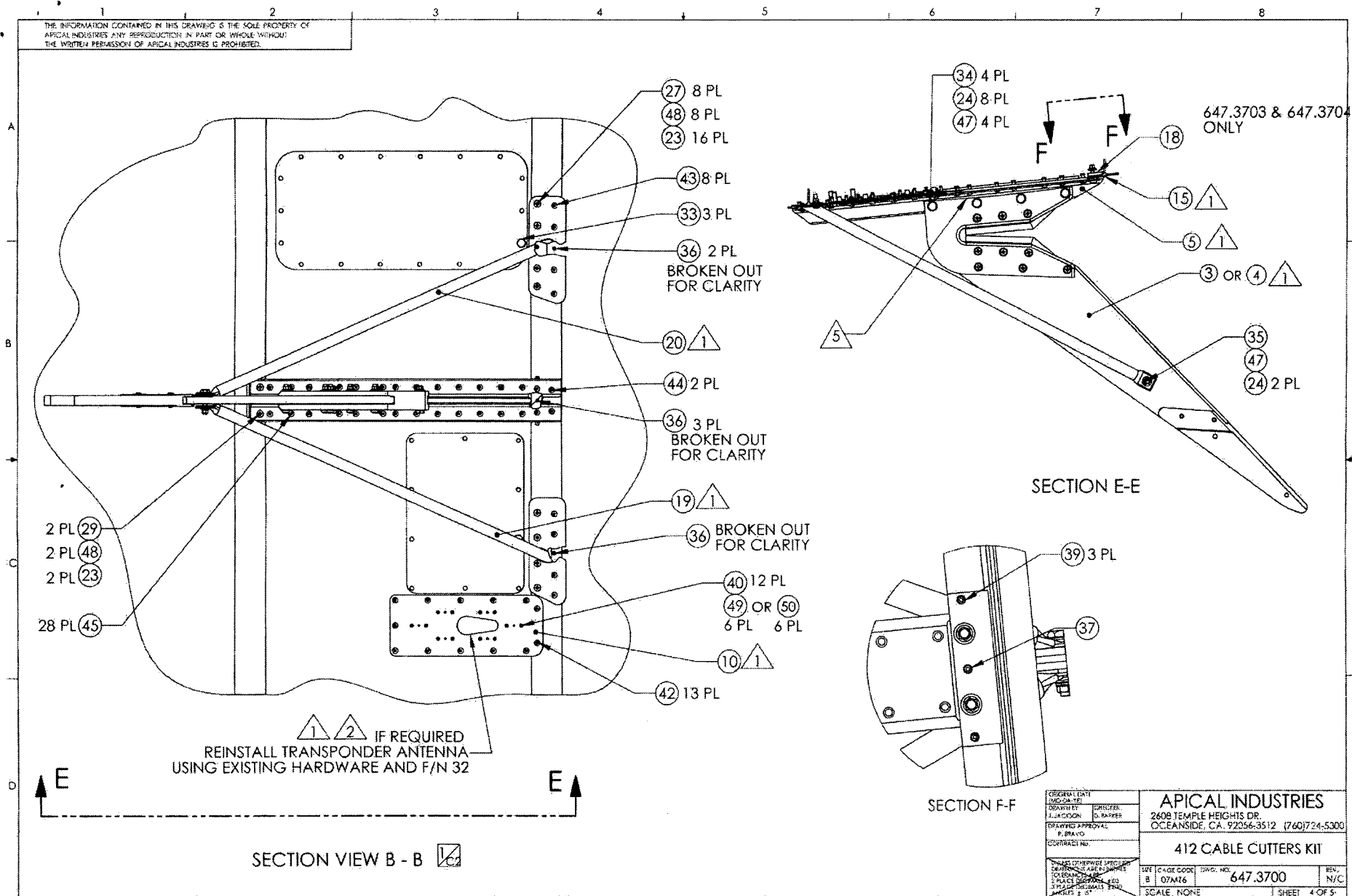
ORIGINAL DATE 2/2/04		DESIGNED BY J. JACKSON		CHECKED BY CL. SAPIER	
DRAWING APPROVAL P. SPAYD		CUTTER CT. NO.		REVISIONS 1. CHIEF ENGINEER SPEC. CHG. 2. CHIEF ENGINEER SPEC. CHG. 3. CHIEF ENGINEER SPEC. CHG. 4. CHIEF ENGINEER SPEC. CHG. 5. CHIEF ENGINEER SPEC. CHG.	
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300		412 CABLE CUTTERS KIT		REV. N/A	
SCALE: NONE		SHEET 2 OF 5		CASE CODE: 647.3700	

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ORIGINAL DATE REV. DATE		APICAL INDUSTRIES	
DRAWN BY J. JACKSON		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5500	
CHECKED BY P. BRAND		412 CABLE CUTTERS KIT	
DESIGNER'S SPECIFICATIONS EXCEPT WHERE SHOWN OTHERWISE		SHEET NO. 8	REV. N/C
SCALE: NONE		647.3700	3 OF 5

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BROKEN OUT FOR CLARITY
RH SIDE ONLY

1 LH ⑧
OR
1 RH ⑦

30
24
47

28 3 PL
24 6 PL
47 3 PL

53 TRIM TO FIT

26 3 PL
24 6 PL
47 3 PL

25 6 PL
24 12 PL
47 6 PL

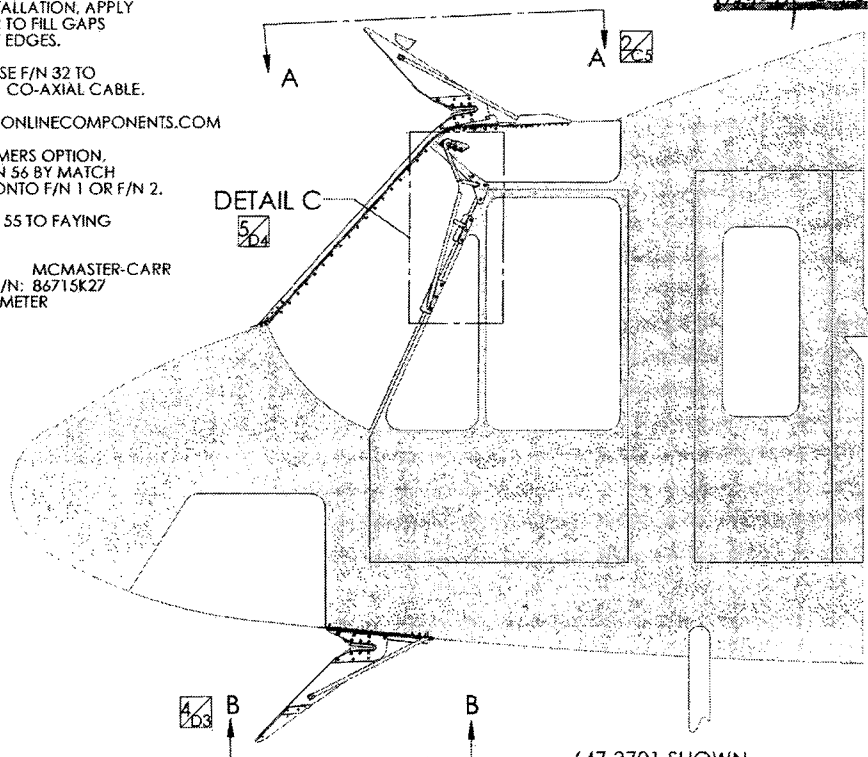
DETAIL C 
LH SHOWN, RH OPPOSITE
2 PL

ORIGINAL DATE		APICAL INDUSTRIES	
INDUSTRY		2608 TEMPLE HEIGHTS DR.	
DRAWN BY		OCEANSIDE, CA. 92056-3512 (760)724-5300	
J. JACKSON		412 CABLE CUTTERS KIT	
CHECKED BY		REV	N/C
D. BARKER		DATE	6/1/76
DRAWING APPROVAL		SCALE	NONE
P. BRAY		SHEET 5 OF 5	
CORRECTIONS			
1. CHANGE DIMENSIONS TO 1/2" (1/4" MIN. THICKNESS)			
2. CHANGE DIMENSIONS TO 1/2" (1/4" MIN. THICKNESS)			
3. CHANGE DIMENSIONS TO 1/2" (1/4" MIN. THICKNESS)			
4. CHANGE DIMENSIONS TO 1/2" (1/4" MIN. THICKNESS)			

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

02728, 04845, 04881

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD. USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
80A DUROMETER



647.3701 SHOWN

	REF	REF	REF	REF	56	647.5701	GPS MOUNT KIT			A
	A/R	A/R	A/R	A/R	55	601.2045	RTV.	LOCKING WRE		A
	A/R	A/R	A/R	A/R	54	601.012	SEALANT	PR-1425 CL-852-9		A
	I	I	I	I	53	601.3083	ADHESIVE RUBBER SEAL	SIL-A-3565		A
	4	4	4	4	52	601.2957	NUTPLATE	MS107162		
	4	4	4	4	51	600.0795	NUTPLATE	MS1047-3		
	6	6	6	6	50	601.3066	NUTPLATE	MS104708		
	6	6	6	6	49	601.3065	NUTPLATE	MS104705		
	18	18	18	18	48	601.2973	LOCKNUT	MS104308		
	79	79	79	79	47	601.2943	LOCKNUT	MS104323		
	4	4	4	4	46	601.2364	CERRY RIVET	CR3215-4-8		
	28	28	42	42	45	601.1183	CERRY RIVET	CR3215-4-5		
	16	16	19	19	44	601.1915	CERRY RIVET	CR3215-4-4		
	24	24	32	32	43	601.0790	CERRY RIVET	CR3215-4-3		
	31	31	13	13	42	601.1039	CERRY RIVET	CR3215-4-2		
3704	3703	3702	3701	FIND	PART #		DESCRIPTION	MATL	SPEC	

16	16	16	16	41	601.2207	NUTPLATE RIVET	CC26655-300	
12	12	12	12	40	601.2491	NUTPLATE RIVET	CC26655-304	
7	7	4	4	39	601.1066	CHERRY RIVET	CR3212-4-4	
17	17	17	17	38	601.1065	CHERRY RIVET	CR3212-4-3	
5	5	6	6	37	601.1604	CHERRY RIVET	CR3212-4-2	
6	6	6	6	36	601.3082	CHERRY RIVET	CR3212-4-1	
2	2	2	2	35	601.1874	BOLT	AN3011A	
8	8	8	8	34	601.2826	BOLT	AN3011A	
3	3	3	3	33	601.2823	BOLT	AN3011A	
1	1	1	1	32	601.3073	CONNECTOR	307-4400	
8	8	8	8	31	601.2419	SCREW	MS2469-AC53	
1	1	1	1	30	601.3070	SCREW	MS2469-4-549	
2	2	2	2	29	601.2893	SCREW	MS27033-0811	
14	14	14	14	28	601.3069	SCREW	MS27039-1-09	
16	16	16	16	27	601.2263	SCREW	MS27039-2808	
42	42	42	42	26	601.1365	SCREW	MS27039-1-10	
12	12	12	12	25	601.2198	SCREW	MS27039-1-07	
157	157	157	157	24	601.1607	WASHER	MS11499-0302P	
34	34	34	34	23	601.2764	WASHER	MS11499-0302P	
1	1	1	1	22	647.4313	RH UPPER STRUT		
1	1	1	1	21	647.4312	LH UPPER STRUT		
1	1	1	1	20	647.4310	LH LOWER STRUT		
1	1	1	1	19	647.4311	RH LOWER STRUT		
1	1	1	1	18	647.4212	PLATE		
1	1	1	1	17	647.4211	BRACKET RH		
1	1	1	1	16	647.4210	BRACKET LH		
1	1	1	1	15	647.4116	SHIM		
2	2	2	2	14	647.4115	SHIM		
2	2	2	2	13	647.4114	SHIM		
1	1	1	1	12	647.4113	CLIP		
1	1	1	1	11	647.4112	CLIP		
1	1	1	1	10	647.4111	DOUBLER		
1	1	1	1	9	647.4110	DOUBLER		
1	1	1	1	8	647.4011	WIPER DEFLECTOR LH		
1	1	1	1	7	647.4010	WIPER DEFLECTOR RH		
1	1	1	1	6	647.3915	DEFLECTOR		
1	1	1	1	5	647.4410	RAIL		
1	1	1	1	4	647.3804	LOWER CUTTER ASSY HIGH		
1	1	1	1	3	647.3803	LOWER CUTTER ASSY LOW		
1	1	1	1	2	647.3802	212 UPPER CUTTER ASSY		
1	1	1	1	1	647.3801	412 UPPER CUTTER ASSY		
					647.3704	204, 205, 212 CABLE CUTTERS KIT HIGH		
					647.3703	204, 205, 212 CABLE CUTTERS KIT LOW		
					647.3702	412 CABLE CUTTERS KIT HIGH		
					647.3701	412 CABLE CUTTERS KIT LOW		
3704	3703	3702	3701	FIND	PART #	DESCRIPTION	MAT'L	SPEC

[illegible]

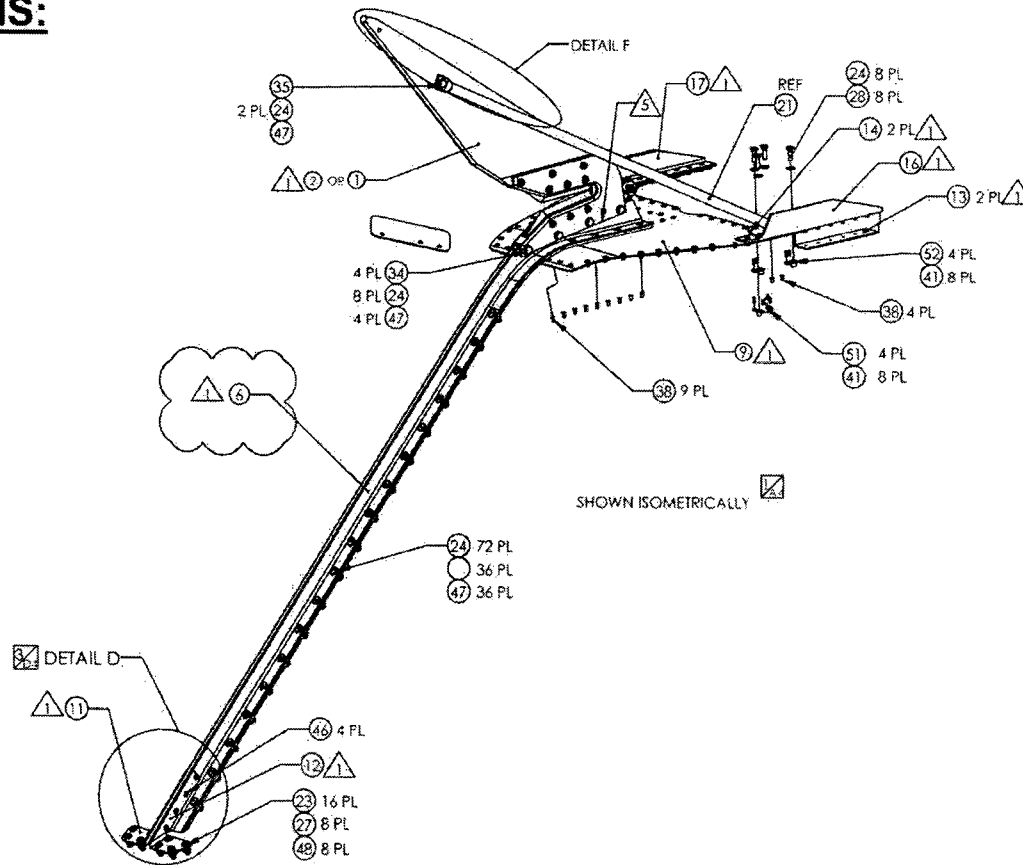
REFERENCE ONLY



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.		04881		SHEET 1 OF 1	
DWG NO.	647.3700	REV:	N/C	PREPARED BY	J. BECKER
DATE:		02/26/15		EFFECT ON DWG ☐ INC. ☒ UNINC.	
DWG TITLE: 412 CABLE CUTTERS KIT					
APPROVED BY:	ENGR. <i>[Signature]</i>	MFG	<i>[Signature]</i>	QC	<i>[Signature]</i>
EFF. NEXT ORDER					
REASON: DELETED F/N 57, REVISED F/N 6.					ECR: N/A

SHEET 1, ZONE C5 IS:



57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF		
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY		
F/N	NTC	PART NUMBER	QTY				DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:			☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM				CHANGE CATEGORY	DER REVIEW REQUIRED	
							☐ MAJOR ☒ MINOR	☐ YES ☒ NO	